

AMENDMENTS

The following listing of claims replaces, without prejudice, all prior versions, and listings, of claims in the application.

1-32 (canceled).

33 (New) A cardiac catheter having a distal end and a wall, the catheter comprising a heat transfer device located approximately at its distal end wherein the heat transfer device is engaged with a catheter wall and a temperature sensing element to measure native blood temperature, wherein the heat transfer device is a flexible film having at least one electrical resistor flow path and includes at least one temperature sensor included on or within the heat transfer device film to monitor the temperature of the electrical flow paths and thus the temperature of the overall heat transfer device.

34 (New) A cardiac catheter as claimed in claim 33 wherein the heat transfer device is a flexible metal film on which the at least one electrical resistor flow path has been formed.

35 (New) A cardiac catheter as claimed 33 wherein at least one electrical path is located on a plastic film backing.

36 (New) A cardiac catheter as claimed in Claim 35 wherein at least one electrical path is added by a deposition process.

37 (New) A cardiac catheter as claimed in Claim 35 wherein at least on electrical path is added by a coating process.

38 (New) A cardiac catheter as claimed in Claim 33 wherein the heat transfer device is disposed directly onto the catheter wall.

39 (New) A cardiac catheter as claimed in Claim 38 wherein the heat transfer device is disposed onto the catheter wall by a deposition process.

40 (New) A cardiac catheter as claimed in Claim 39 wherein the deposition process is a plasma deposition process.

41 (New) A cardiac catheter as claimed in Claim 39 wherein the deposition process is a printing process.

42 (New) A cardiac catheter as claimed in Claim 41 wherein the printing process uses a conductive medium, with subsequent etching.

43 (New) A cardiac catheter as claimed in Claim 33 wherein the temperature sensor is also disposed onto the catheter wall by a deposition process.

44 (New) A cardiac catheter as claimed in Claim 33 wherein at least one insulator layer is located over the electrical resistor flow path.

45 (New) A cardiac catheter as claimed in Claim 44 wherein at least one insulator layer is made from parylene C.

46 (New) A cardiac catheter as claimed Claim 33 wherein the heat transfer device comprises an outwardly located layer of material selected from a group consisting of silver or gold.

47 (New) A cardiac catheter as claimed in Claim 33 wherein a length of the outer wall of the catheter is at least partly formed from doped material able to act as a heat transfer device upon application of power therethrough.

48 (New) A cardiac catheter as claimed in Claim 47 wherein the doped material is selected from the group consisting of silver or gold.

49 (New) A cardiac catheter as claimed in Claim 33 wherein the catheter wall has at least one metal wire in at least a portion of the wall.

50 (New) A cardiac catheter as claimed in Claim 49 wherein at least one wire is copper.

51 (New) A cardiac catheter as claimed in Claim 49 wherein at least one wire is co-extruded within the catheter body.

52 (New) A cardiac catheter as claimed in Claim 49 wherein the catheter wall includes at least one set of wires.

53 (New) A cardiac catheter as claimed in Claim 52 wherein the catheter body has three sets of wires, each set comprising two wires.

54 (New) A cardiac catheter as claimed in claim 49 wherein each wire (38) inside the catheter wall is easily exposable.

55 (New) A cardiac catheter as claimed in Claim 33 wherein the catheter has a diameter of between approximately size 3-5F.

56 (New) A cardiac catheter as claimed Claim 33 having a single distal lumen.

57 (New) A cardiac catheter as claimed in Claim 56 wherein the lumen has a diameter of between approximately 0.5 to 0.7 mm.